I claim:

1. A method of combining multiple frames of images acquired in a scan of an object surface with an array microscope, comprising the following steps:

calibrating said array microscope to derive correction factors for distortion in said images;

applying said correction factors to the multiple frames of images to obtain multiple frames of corrected images; and

combining said multiple frames of corrected images to produce a composite image of the object surface.

2. The method of Claim 1, wherein said calibrating step includes deriving correction factors for chromatic aberrations produced by the array microscope in said images.

3. The method of Claim 1, wherein said calibrating step includes deriving correction factors for producing a uniform spectral response throughout the array microscope.

4. The method of Claim 1, wherein said calibrating step includes deriving correction factors for producing a uniform gain throughout the array microscope.

5. The method of Claim 1, wherein said calibrating step includes deriving correction factors for producing a uniform offset throughout the array microscope.

6. The method of Claim 1, wherein said combining step is carried out by concatenating said multiple frames of corrected images; and said concatenating step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

7. The method of Claim 1, wherein said combining step is carried out by stitching said multiple frames of corrected images; and said stitching step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

8. A method of combining multiple frames of images acquired in a scan of an object surface with an array microscope, comprising the following steps:

calibrating said array microscope to derive correction factors to produce a uniform spectral response throughout said array microscope;

applying said correction factors to said multiple frames of images to obtain multiple frames of corrected images; and

combining said multiple frames of corrected images to produce a composite image of the object surface.

9. The method of Claim 8, wherein said calibrating step includes deriving correction factors for chromatic aberrations produced by the array microscope in said images.

10. The method of Claim 9, wherein said calibrating step includes deriving correction factors for producing a uniform gain throughout the array microscope.

11. The method of Claim 9, wherein said calibrating step includes deriving correction factors for producing a uniform offset throughout the array microscope.

12. The method of Claim 9, wherein said combining step is carried out by concatenating said multiple frames of corrected images; and said concatenating step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

13. The method of Claim 9, wherein said combining step is carried out by stitching said multiple frames of corrected images; and said stitching step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

14. A method of combining multiple frames of images acquired in a scan of an object surface with an array microscope, comprising the following steps:

calibrating said array microscope to derive correction factors to produce a uniform gain throughout said array microscope;

applying said correction factors to said multiple frames of images to obtain multiple frames of corrected images; and

combining said multiple frames of corrected images to produce a composite image of the object surface.

15. The method of Claim 14, wherein said calibrating step includes deriving correction factors for producing a uniform offset throughout the array microscope.

16. The method of Claim 14, wherein said calibrating step includes deriving correction factors for chromatic aberrations produced by the array microscope in said images.

17. The method of Claim 14, wherein said calibrating step includes deriving correction factors for producing a uniform spectral response throughout the array microscope.

18. The method of Claim 14, wherein said combining step is carried out by concatenating said multiple frames of corrected images; and said concatenating step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

19. The method of Claim 14, wherein said combining step is carried out by stitching said multiple frames of corrected images; and said stitching step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

20. A method of imaging an object surface with an array microscope comprising the following steps:

calibrating the array microscope to derive correction factors designed to correct imaging characteristics of individual microscopes in the array microscope in order to normalize an output thereof and produce images with uniform optical properties;

scanning said object surface to acquire multiple frames of said images with the array microscope;

applying said correction factors to the multiple frames of images to obtain multiple frames of corrected images; and

combining the multiple frames of corrected images to produce a composite image of the object surface.

21. The method of Claim 20, wherein said imaging characteristics comprise at least one among spectral response, gain, offset, distortion, and chromatic aberration.

22. The method of Claim 20, wherein said combining step is carried out by concatenating said multiple frames of corrected images; and said concatenating step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

23. The method of Claim 20, wherein said combining step is carried out by stitching said multiple frames of corrected images; said stitching step is carried out by aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and by repeating said alignment procedure for each pair of said multiple frames of corrected images.

24. An array microscope for imaging an object surface comprising:

means for calibrating the array microscope to derive correction factors designed to correct imaging characteristics of individual microscopes in the array microscope in order to normalize an output thereof and produce images with uniform optical properties;

means for scanning said object surface to acquire multiple frames of said images with the array microscope;

means for applying said correction factors to the multiple frames of images to obtain multiple frames of corrected images; and

means for combining the multiple frames of corrected images to produce a composite image of the object surface;

wherein said calibrating means consists of sample surfaces with predetermined physical characteristics designed to produce target images with predetermined optical properties, so that deviations from said predetermined optical properties may be used to compute correction factors relative to said imaging characteristics.

25. The array microscope of Claim 24, wherein said imaging characteristics comprise at least one among spectral response, gain, offset, distortion, and chromatic aberration.

26. The array microscope of Claim 24, wherein said means for combining the multiple frames of corrected images to produce a composite image of the object surface includes means for concatenating said multiple frames of corrected images; and said concatenating means further includes a means for aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and for repeating said alignment procedure for each pair of said multiple frames of corrected images.

27. The array microscope of Claim 24, wherein said means for combining the multiple frames of corrected images to produce a composite image of the object surface includes means for stitching said multiple frames of corrected images; and said stitching means further includes a means for aligning an individual image from one of said corrected images with an adjacent individual image from another of said corrected images, and for repeating said alignment procedure for each pair of said multiple frames of corrected images.